

gains arising from the presence of such efficiencies should in general flow to customers of *monopoly* services rather than be used to reduce the effective cost of competitive services or otherwise benefit the utilities' shareholders. As a matter of sound economic policy, such joint use should be encouraged. However, at the same time, it is essential that regulators recognize and address the economic risks that arise by such a policy if the joint use of common plant permits the integrated firm to produce its *competitive* services at a cost that is below that which would be incurred by any competitor *who did not possess the ability to commingle the production process with that for basic monopoly telephone services*. The integrated firm would almost always then be in a position to *underprice* any and all competitors and thereby to prevent sustainable entry, thus preserving its monopoly status over the long run.

Moreover, to the extent that the overwhelming majority of the jointly-used plant and operations was acquired originally to support regulated monopoly services under a regulatory paradigm in which the actual investors were largely (if not entirely) insulated from most normal business risks, it is entirely reasonable that any added value that the utility may be able to derive from that capital base and operations be used, first, to offset any "losses" that might otherwise arise due to the presence of a partially competitive market, and only then to capture the gains for its own owners and investors.

In order to determine the proper (i.e., fair and economically efficient) assignment of the costs and benefits of joint-use plant to the monopoly and competitive service categories, it is useful to consider two positions that seem inherent in many LECs' view of the world. First, with respect to the emergence of competition, LECs seem to believe that any competitor that enters and makes inroads into their traditional market(s) must render them whole for the revenue (or "contribution") that is foregone as a result of shrinking the LEC's share of the market.¹⁶ Second, LECs seem to believe that the benefits of jointly used plant — i.e., plant that supports the provision of both monopoly and competitive services — are available either to support their own competitive initiatives or simply to increase their profits overall. These two positions — recovery of "competitive losses" and the right to flow the gains from joint production to the LEC's own benefit — would inappropriately validate the LECs' parochial perspective on competition, and deny ratepayers the full societal benefits that could ensue from (1) allowing multiple providers to offer potentially competitive telecommunications services, and (2) integrating resources to support multiple, diverse operations.

If an economy of scope exists as between a monopoly and a competitive service, permitting the integrated firm to flow any of the benefits of joint production to the competitive service will afford it an unfair advantage over any *non-integrated* competitor. Consider the case of billing and collection services. The LEC typically sends out only a

16. For example, in the California PUC's IRD proceeding (1.87-11-033, IRD Phase), Pacific Bell argued that it should be entitled to recover "competitive losses" arising from the opening up of the California intraLATA toll market to competitive entry, a position that the Commission soundly rejected.

Assigning the Costs and Benefits of Joint-use Plant

single billing statement to its customers that covers both local and long distance services. By including competitive (long distance or other) services on the same monopoly (local) services bill, the integrated LEC avoids the costs of preparing and mailing a separate long distance bill and of separately processing and accounting for payments thereof. In fact, the marginal cost of including long distance services on the local services bill, which would be mailed out in any event, is negligible. Except in rare cases, the long distance billing activity does not even require an additional stamp, or an additional envelope, or additional collection processing costs.¹⁷ Non-integrated long distance competitors might have to incur costs of between \$1 and \$2 per month per customer account to accomplish the same thing.¹⁸

The theory here seems to be that since the local service bill will have to be prepared and mailed in any event, the inclusion of long distance charges represents only the *marginal* cost for the added data processing and printing and, occasionally, for additional postage. Of course, an equally compelling argument could be advanced to support reversing this particular "chicken and egg:" For most residential and for many business subscriber, local telephone service is furnished on a *flat rate* basis, hence there is essentially *no variation in the monthly charge for basic local telephone service* from one month to the next. Some types of billing for local telephone service only (i.e., without any long distance charges) could thus be done annually or quarterly (as it is in the UK), or otherwise be accomplished via some procedure that did not involve the use of a monthly billing statement.¹⁹ Under this view, the *cause* of the requirement to prepare and to mail a bill to each customer each month is the inclusion of *variable* long distance charges, and it is these long distance services, and not the fixed-priced local service, that should be responsible for the base level of billing costs.

Although the integrated telephone utility might prefer to "piggy-back" its long distance bill on the local service bill (on the basis that the latter will be sent out in any event), its refusal to make the same low-marginal-cost service available on an equivalent basis to its IXC competitors means that competitors must incur a cost that the telephone company can, in

17. The benefits of such joint provisioning extend well beyond the ability to avoid the costs of a second envelope and postage stamp. For example, precisely because the toll charges appear on the same statement as the charges for the basic local exchange service, customers are more likely to pay the charges than for a strictly "non-utility" bill. Delinquency or tardiness on a competitor's toll bill (i.e., one that simply includes toll charges) are more likely than on a LEC bill which is "imprinted" with the image and history of a "public utility."

18. Some of the billing and collection costs may include hardware costs (maintaining a computerized system to handle a comprehensive database of customer and pricing information); software costs (developing and maintaining programs to retrieve and print information); customer representative costs (responding to customer queries and complaints about charges); legal and administrative costs (following up on delinquent bills); and postage and printing costs.

19. For example, the customer could be provided with a booklet of 12 pre-printed coupons, one for each month of the year, along with pre-addressed reply envelopes. Each month, the customer would tear out one such coupon and mail it with his or her check back to the telephone company in the provided reply envelope.

effect, avoid. But what if the local service bill is considered to be "piggy-backed" on the long distance bill? Since any firm that is engaged in the (competitive) long distance business will necessarily have to prepare and mail bills to its customers, it is reasonable to require the competitive long distance service component of the integrated telephone company to similarly pay for the costs of preparing and mailing its bills. However, since the bill will be prepared anyway for long distance calling services, it is *efficient* for the integrated telephone company to include, at little or no added cost, the billing for basic (monopoly) telephone service. The differences between this case and the earlier approach are that (a) the integrated LEC's competitive services are not benefitted from the joint billing activity in a manner that is not available to other long distance competitors, and (b) the economic efficiencies arising from the joint billing activity are not sacrificed, but are merely shifted from the competitive to the monopoly service column.

Alternatively, the integrated firm might (either by choice or by regulatory fiat) make the very same billing efficiencies available to any non-affiliated long distance service competitor by offering to sell that competitor its billing and collection services at a price that is no greater than that which the non-affiliated competitor would incur on a stand-alone basis, and to impute that same charge for billing and collection service into its own (competitive) long distance and other services. Here, economic efficiency is still achieved (indeed, enhanced, because additional joint billing activities will now be supported), but unlike the first case there is no specific requirement that the price charged or imputed for the joint activity be set at the stand-alone cost. Instead, all that is required is that the same price be charged both to the integrated firm's own competitive business as is charged to non-affiliated competitors, *and that all of the excess of revenues over costs be treated as "contribution" and flowed to the monopoly sector.*²⁰

The principle of ensuring that the monopoly service category is adequately compensated for use of common plant and other resources by competitive services pertains to all of the integrated LEC's joint functions. There are, basically, two alternative means for assuring both that potential economies of joint production are realized by the economy generally while at the same time assuring that the flow of the joint benefits is directed in a manner that neither produces an unfair competitive advantage for any participant or that creates a undeserved windfall for the utility itself:

20. Yet another variation on this approach would be for the competing long distance provider, which performs its own billing and collection operations, to include the local telephone company's basic monthly local service charge on the competitor's long distance bill, and to charge the local telephone company a price for this billing and collection service that is less than the stand-alone cost that the telephone company would itself incur.

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Option 1: Allow competitors comparable access to integrated resources.

Under this approach, the integrated LEC allows competitors to have access to its integrated resources at the same prices, terms, and conditions as apply when these resources are utilized by the LEC's own competitive services operations. The total of the charges for these resources (those imputed as implicit costs to the LEC's competitive operations *and* those explicit charges paid for in cash by non-affiliated competitors) should then be carried as *monopoly services revenues* and be used as an offset against the amount needed to recover foregone contribution. Under this option, there is no specific level at which the "price" charged or imputed for access to the joint resource is set, except that (a) it must be no greater than the stand-alone cost that a competitor would incur without benefit of access to the joint production activity, and (b) that such prices be imputed as costs to the competitive sector and such payments and imputations be carried as *monopoly services revenues* to be counted against the aggregate monopoly services revenue requirement.²¹

Option 2: Impute to the LEC's competitive operations the full (stand-alone) costs associated with any use of common resources and plant.

If the integrated LEC is not expressly required to offer, and does not offer, shared access to its joint plant and other resources, the utility should be required to impute to the competitive side of its business the full stand-alone costs associated with replicating the service in question that is presently being offered on an integrated basis — i.e., the costs that the competitive division would incur were it to replicate the service and/or plant on a stand-alone basis.

More generally, the integrated local telephone utility should be required either to "sell" its scope economies to competing service providers at a reasonable cost and charge the same to its competitive services, or impute to its competitive services and transfer out of its monopoly services the full stand-alone cost that the competitive segment or any other competitor would be required to incur if the function were to be supported on a stand-alone basis.

21. Note that the adoption of price cap regulation may make a nullity of the imputation requirement, at least in the short run. Under price caps, the fact that additional revenues (in this case, those imputed over to the monopoly category from the provision of joint-use resources to competitive services, as well as those collected in cash from the provision of these same resources to non-affiliated competitors) are treated in the monopoly category may not directly offset the residual revenues to be generated from other monopoly services. Presumably, before price cap regulation is implemented, the relationships among all of these actual and imputed revenues and costs can be identified and captured by the price cap mechanism itself.

Compensating the monopoly operations adequately for the use of common plant and other common resources by the competitive operations does not mean that society should forego the benefits of integration.

The fact that there is an effort associated with properly attributing the costs and benefits of joint plant (or resources) does not mean that society need forego the benefits of integration; in fact, to do so would result in an undesirable deadweight loss to the economy as a whole.²² Rather, assuming that there are efficiencies associated with maintaining and utilizing joint plant, one need only address the question of how to allocate the benefits of these efficiencies, rather than the threshold question of whether the efficiencies themselves should be realized or foregone.

As a general principle, the assignment of benefits should follow the assignment of costs. If the integrated LEC is to be made whole through prices it is permitted to charge for services placed in the monopoly category (including those "essential" access services that are furnished on a monopoly basis to competitors) for all of the costs of its core network, then all of the benefits flowing from the joint use of that core network for monopoly and competitive services should flow to the monopoly side of the integrated firm's business.

There are, however, certain instances where the *identification* of gains from integration are more difficult to precisely measure. Consider the case of the deployment of advanced infrastructure that may support both monopoly telephony services and competitive video ventures. It is theoretically possible that if undertaken solely to support *either* the monopoly operations *or* the competitive operations, certain network modernization programs, such as the deployment of broadband facilities, could not be economically justified, but that if undertaken for *both* the monopoly operations *and* the competitive operations, broadband construction could be economically justified.²³ Under this hypothetical scenario, neither the additional *monopoly* revenues (and reduced expenses) nor the *competitive* revenues (and reduced

22. In economic theory, a "deadweight loss" occurs when a resource is wasted, such as the non-use of available capacity in the public telephone network. Deadweight losses are frequently the result of "allocative inefficiencies" that occur when the pricing mechanism is subjected to artificial constraints or other distortions, and is not permitted to function as it should in allocating society's resources to their most valuable use. Effective competition, among other things, should minimize such allocative inefficiencies. See, e.g., Samuelson, Paul A., *Economics*, McGraw-Hill, 1976, at 518-520.

23. This is probably not the case with respect to the various "broadband network" or "information superhighway" proposals being advanced and pursued by the dominant LECs. Not only are the billions of dollars required for such network upgrade program not cost-justified for either the (monopoly) telephony-only or a (competitive) video/broadband-only scenarios, it is also not likely to survive an economic cost/benefit test even if the new resources are jointly used to support both traditional telephone services as well as new video program delivery and broadband transport. See Selwyn, L. *et al*, "Cable Television Competition in Canada," Boston, Mass.: Economics and Technology, Inc., 1995, prepared for the Canadian Cable Television Association for submission in *Order in Council 1994-1689, Public Notice CRTC 1994-130*, filed January 16, 1995.

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expenses) that would result from the deployment of broadband — *if examined in isolation* — would justify the costs associated with such deployment. By contrast, under this illustrative scenario, the *combined* cash flow analysis would justify the cost. If this were the case, it would then be necessary to assign the joint costs to the respective operations.²⁴ *Regardless of the method of cost assignment*, however, it is essential that the utility be able to demonstrate that the expected *incremental* revenues (and other benefits, such as cost avoidance) that will be assigned to the monopoly service category offset the cost that will be allocated to the monopoly telephony operations, thereby justifying participation in the investment.²⁵

Because so much of the LECs' asset base is comprised of common plant, there is no simple physical analogue under which a definitive attribution of costs to the new broadband and video services can be accomplished. Yet the larger the share of total plant that is assigned to monopoly services, the more difficult it will be for any would-be competitor to enter and to succeed in the marketplace. The approach that appears to be favored by the LECs is that all joint-use, common plant be assigned to monopoly services, and that services placed in the competitive category be required to carry only those costs that are *directly attributable* to competitive services, i.e., those that are "incremental" to the provision of basic monopoly services and that would not be incurred were the LECs' output limited to only those monopoly services. Viewed on a static basis, the effect of such an assignment would be to confer *all* of the benefits attributable to integrated provision of the monopoly and competitive services onto the competitive services and, since there is no earnings limit on competitive services, onto the utility's shareholders. Viewed dynamically, the effect of this type of assignment would likely be actually to impose *additional costs* upon captive customers of the LEC's monopoly services.

24. If two parties share the costs of digging a trench because the cost — if halved — is justified by the respective benefits, then it would not be appropriate to require each party to attribute the full cost of the trench-digging to the operation in question. On the other hand, it would be necessary to determine a basis of assigning the costs between the two participants in the project.

25. Note that the portion of the joint plant acquisition program that is assigned to the monopoly segment must still be economically justified in all respects. For example, if the telephone company intends that all incremental revenues attributable to the provision of broadband and video services be classified as competitive and hence be excluded from the utility's revenue requirement, then the economic analysis that is developed to support the allocation of some specific portion of the joint plant acquisition program to the utility sector cannot include any incremental revenues. Instead, that economic analysis would have to be driven by cost avoidance, intangible gains from improvement in service quality, or some other (non-revenue) factors.

Conclusion

This paper has served to highlight the complexities and considerable difficulties that confront regulators in their attempt to permit integrated operation, capture for the overall economy the gains available through joint production of monopoly and competitive telecommunications services, while at the same time assuring that those gains are appropriately flowed through to the economy and that competition and competitors are not disadvantaged. The paper has discussed a number of fundamental principles, which are summarized here:

- Regulators should recognize that there are, in fact, mechanical properties of the existing regulatory cost accounting processes that permit and that frequently *conceal* cost shifts from competitive to monopoly services, processes that must be recognized and corrected. In particular, regulators should not merely extrapolate historic conditions relating to usage, cost attribution, productivity, and other factors in designing policies to deal with future additions to the utility's rate base and, more generally, the regulatory paradigm that will apply in the mixed monopoly/competitive environment. Rather in assigning costs as between the monopoly and competitive sectors, regulators should focus upon the *purpose* for which such costs were initially incurred, and the *effects* that future rate base additions will have upon recurring depreciation and excess capacity costs that may be assigned to the monopoly category.
- The overriding goal of economic efficiency and maximizing the productivity of the nation's economic resources requires that integrated LECs make available to other telecommunications providers the efficiencies inherent in the LECs' joint and common plant, either by permitting these efficiencies to be shared among all competitors, or by imputing all economic benefits arising from integrated operations to the competitive activity and treating them as monopoly services revenues. In general, shared use is preferable because it maximizes the use of joint resources.
- Any economic gains arising from the integrated LEC's joint production of monopoly and competitive services should be used to defray the joint and common costs inherent in the operation of the LEC's common capital and organizational resource base. Projections of future LEC operating conditions, including costs, revenues, productivity, and other factors, should reflect the availability of such gains to the monopoly services segment.

Statement of Qualifications

DR. LEE L. SELWYN

Dr. Lee L. Selwyn has been actively involved in the telecommunications field for more than twenty-five years, and is an internationally recognized authority on telecommunications regulation, economics and public policy. Dr. Selwyn founded the firm of Economics and Technology, Inc. in 1972, and has served as its President since that date. He received his Ph.D. degree from the Alfred P. Sloan School of Management at the Massachusetts Institute of Technology. He also holds a Master of Science degree in Industrial Management from MIT and a Bachelor of Arts degree with honors in Economics from Queens College of the City University of New York.

Dr. Selwyn has testified as an expert on rate design, service cost analysis, form of regulation, and other telecommunications policy issues in telecommunications regulatory proceedings before some forty state commissions, the Federal Communications Commission and the Canadian Radio-television and Telecommunications Commission, among others. He has appeared as a witness on behalf of commercial organizations, non-profit institutions, as well as local, state and federal government authorities responsible for telecommunications regulation and consumer advocacy.

He has served or is now serving as a consultant to numerous state utilities commissions including those in Arizona, Minnesota, Kansas, Kentucky, the District of Columbia, Connecticut, California, Delaware, Maine, Massachusetts, New Hampshire, Vermont, New Mexico, Wisconsin and Washington State, the Office of Telecommunications Policy (Executive Office of the President), the National Telecommunications and Information Administration, the Federal Communications Commission, the Canadian Radio-television and Telecommunications Commission, the United Kingdom Office of Telecommunications, and the Secretaria de Comunicaciones y Transportes of the Republic of Mexico. He has also served as an advisor on telecommunications regulatory matters to the International Communications Association and the Ad Hoc Telecommunications Users Committee, as well as to a number of major corporate telecommunications users, information services providers, paging and cellular carriers, and specialized access services carriers.

Dr. Selwyn has presented testimony as an invited witness before the U.S. House of Representatives Subcommittee on Telecommunications, Consumer Protection and Finance and before the U.S. Senate Judiciary Committee, on subjects dealing with restructuring and deregulation of portions of the telecommunications industry.

In 1970, he was awarded a Post-Doctoral Research Grant in Public Utility Economics under a program sponsored by the American Telephone and Telegraph Company, to conduct research on the economic effects of telephone rate structures upon the computer time sharing industry. This work was conducted at Harvard University's Program on Technology and Society, where he was appointed as a Research Associate. Dr. Selwyn was also a member of

the faculty at the College of Business Administration at Boston University from 1968 until 1973, where he taught courses in economics, finance and management information systems.

Dr. Selwyn has published numerous papers and articles in professional and trade journals on the subject of telecommunications service regulation, cost methodology, rate design and pricing policy. These have included:

"Pricing Telephone Terminal Equipment Under Competition"

Public Utilities Fortnightly

December 8, 1977

"Deregulation, Competition, and Regulatory Responsibility in the Telecommunications Industry"

Presented at the 1979 Rate Symposium on Problems of Regulated Industries - Sponsored by: The American University, Foster Associates, Inc., Missouri Public Service Commission, University of Missouri-Columbia

Kansas City, MO - February 11 - 14, 1979

"Sifting Out the Economic Costs of Terminal Equipment Services"

Telephone Engineer and Management

October 15, 1979

"Usage-Sensitive Pricing" (with G. F. Borton)

(a three part series)

Telephony

January 7, 28, February 11, 1980

"Perspectives on Usage-Sensitive Pricing"

Public Utilities Fortnightly

May 7, 1981

"Diversification, Deregulation, and Increased Uncertainty in the Public Utility Industries"

Comments Presented at the Thirteenth Annual Conference of the Institute of Public Utilities

Williamsburg, VA - December 14 - 16, 1981

"Local Telephone Pricing: Is There a Better Way?: The Costs of LMS Exceed its Benefits: a Report on Recent U.S. Experience."

Proceedings of a conference held at Montreal, Quebec - Sponsored by Canadian Radio-Television and Telecommunications Commission and The Centre for the Study of Regulated Industries, McGill University

May 2 - 4, 1984

"Long-Run Regulation of AT&T: A Key Element of A Competitive Telecommunications Policy"

Telematics

August 1984

"Is Equal Access an Adequate Justification for Removing Restrictions on BOC Diversification?"

*Presented at the Institute of Public Utilities Eighteenth Annual Conference
Williamsburg, VA - December 8 - 10, 1986*

"Market Power and Competition Under an Equal Access Environment"

*Presented at the Sixteenth Annual Conference, "Impact of Deregulation and Market Forces on Public Utilities: The Future Role of Regulation"
Institute of Public Utilities, Michigan State University
Williamsburg, VA - December 3 - 5, 1987*

"Contestable Markets: Theory vs. Fact"

*Presented at the Conference on Current Issues in Telephone Regulations: Dominance and Cost Allocation in Interexchange Markets - Center for Legal and Regulatory Studies Department of Management Science and Information Systems - Graduate School of Business, University of Texas at Austin
October 5, 1987*

"The Sources and Exercise of Market Power in the Market for Interexchange Telecommunications Services"

*Presented at the Nineteenth Annual Conference - "Alternatives to Traditional Regulation: Options for Reform" - Institute of Public Utilities, Michigan State University
Williamsburg, VA, December, 1987*

"Assessing Market Power and Competition in The Telecommunications Industry: Toward an Empirical Foundation for Regulatory Reform"

*Federal Communications Law Journal
Vol. 40 Num. 2, April 1988*

"A Perspective on Price Caps as a Substitute for Traditional Revenue Requirements Regulation"

*Presented at the Twentieth Annual Conference - "New Regulatory Concepts, Issues and Controversies" - Institute of Public Utilities, Michigan State University
Williamsburg, VA, December, 1988*

"The Sustainability of Competition in Light of New Technologies" (with D. N. Townsend and P. D. Kravtin)

Presented at the Twentieth Annual Conference - Institute of Public Utilities Michigan State University

Williamsburg, VA, December, 1988

"Adapting Telecom Regulation to Industry Change: Promoting Development Without Compromising Ratepayer Protection" (with S. C. Lundquist)

IEEE Communications Magazine January, 1989

"The Role of Cost Based Pricing of Telecommunications Services in the Age of Technology and Competition"

Presented at National Regulatory Research Institute Conference, Seattle, July 20, 1990.

"A Public Good/Private Good Framework for Identifying POTS Objectives for the Public Switched Network" (with Patricia D. Kravtin and Paul S. Keller)

Columbus, Ohio: National Regulatory Research Institute, September 1991.

"Telecommunications Regulation and Infrastructure Development: Alternative Models for the Public/Private Partnership"

Prepared for the Economic Symposium of the International Telecommunications Union Europe Telecom '92 Conference, Budapest, Hungary, October 15, 1992.

"Efficient Infrastructure Development and the Local Telephone Company's Role in Competitive Industry Environment" Presented at the Twenty-Fourth Annual Conference, Institute of Public Utilities, Graduate School of Business, Michigan State University, "Shifting Boundaries between Regulation and Competition in Telecommunications and Energy", Williamsburg, Virginia,

"Measurement of Telecommunications Productivity: Methods, Applications and Limitations" (with Françoise M. Clottes)

Presented at Organisation for Economic Cooperation and Development, Working Party on Telecommunication and Information Services Policies, '93 Conference "Defining Performance Indicators for Competitive Telecommunications Markets", Paris, France, February 8-9, 1993.

"Market Failure in "Open" Telecommunications Networks: Defining the New "Natural Monopoly"

Presented at the Tenth Michigan Conference on Public Utility Economics, Western Michigan University, Kalamazoo, Michigan, March 26, 1993. Also forthcoming in Utilities Policy, January, 1994.

"Telecommunications Investment and Economic Development: Achieving efficiency and balance among competing public policy and stakeholder interests"

Presented at the 105th Annual Convention and Regulatory Symposium, National Association of Regulatory Utility Commissioners, New York, November 18, 1993.

"The Potential for Competition in the Market for Local Telephone Services" (with David N. Townsend and Paul S. Keller)

Presented at the Organization for Economic Cooperation and Development Conference, December 6-7, 1993.

"Market Failure in Open Telecommunications Networks: Defining the new natural monopoly," *Utilities Policy*, Vol. 4, No. 1, January 1994.

***"The Enduring Local Bottleneck: Monopoly Power and the Local Exchange Carriers,"* (with Susan M. Gately, et al) a report prepared by ETI and Hatfield Associates, Inc. for AT&T, MCI and CompTel, February 1994.**

Dr. Selwyn has been an invited speaker at numerous seminars and conferences on telecommunications regulation and policy, including meetings and workshops sponsored by the National Telecommunications and Information Administration, the National Association of Regulatory Utility Commissioners, the U.S. General Services Administration, the Institute of Public Utilities at Michigan State University, the National Regulatory Research Institute at Ohio State University, the Harvard University Program on Information Resources Policy, the Columbia University Institute for Tele-Information, the International Communications Association, the Tele-Communications Association, the Western Conference of Public Service Commissioners, at the New England, Mid-America, Southern and Western regional PUC/PSC conferences, as well as at numerous conferences and workshops sponsored by individual regulatory agencies.

APPENDIX C

Table 2

INTEREXCHANGE CARRIER MARKET SHARES

<u>Year</u>	<u>AT&T</u>	<u>MCI</u>	<u>Sprint</u>	<u>Other Carriers</u>
1984	90.10%	4.5%	2.7%	2.7%
1985	86.30%	5.5%	2.8%	5.4%
1986	81.90%	7.8%	4.3%	6.0%
1987	78.60%	8.8%	5.8%	6.8%
1988	74.60%	10.3%	7.2%	7.9%
1989	67.50%	12.1%	8.4%	12.0%
1990	65.00%	14.2%	9.7%	11.1%
1991	63.20%	15.2%	9.9%	11.7%
1992	60.80%	16.7%	9.7%	12.8%
1993	58.10%	17.8%	10.0%	14.1%
1994	59.70%	18.8%	10.9%	10.6%

Note: Other carriers market share includes share of LDDS Communications, Inc.

Source: Long Distance Market Shares, Fourth Quarter 1994, Industry Analysis Division, Common Carrier Bureau, FCC, April 1995; and 1994 data from Common Carrier Competition Report, Common Carrier Bureau, FCC, Spring 1995.

APPENDIX D

Table 3

**INTEREXCHANGE CARRIER REVENUES
FROM INTEREXCHANGE SERVICES**

<u>Year</u>	<u>AT&T</u>	<u>MCI</u>	<u>Sprint</u>	<u>Other Carriers</u>
1984	\$34,935	\$1,761	\$1,052	\$902
1985	\$36,770	\$2,331	\$1,509	\$1,821
1986	\$36,514	\$3,372	\$2,132	\$2,286
1987	\$35,219	\$3,938	\$2,592	\$2,638
1988	\$35,407	\$4,888	\$3,405	\$3,264
1989	\$34,549	\$8,171	\$4,320	\$5,422
1990	\$33,880	\$7,392	\$5,041	\$5,760
1991	\$34,384	\$8,266	\$5,378	\$6,413
1992	\$35,495	\$3,719	\$5,858	\$7,487
1993	\$35,731	\$10,947	\$6,130	\$8,716
1994	\$37,166	\$11,715	\$6,805	\$6,611

Note: Other Carriers market share includes share of LDDS Communications, Inc.

Source: Long Distance Market Shares, Fourth Quarter of 1994, Industry Analysis Division, Common Carrier Bureau, FCC, April 1995.

APPENDIX E

In The Matter Of:

*Department of Public Utilities 94-185
Intralata and Local Exchange Competition*

*Hearing Volume Number 18
October 10, 1995*

*** FRITZ & SHEEHAN ASSOCIATES, INC. ***

295 Devonshire Street

Boston, MA 02110

(617) 423-0500

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COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF PUBLIC UTILITIES
DPU 94-185

CONTINUED PUBLIC HEARING held at the Leverett
Saltonstall Building, 100 Cambridge Street, Boston,
Massachusetts, on October 10, 1995, commencing at
9:08 a.m., concerning:

INTRALATA AND LOCAL EXCHANGE COMPETITION

SITTING: Michael Isenberg, Hearing Officer
Thomas Besette, Hearing Officer
Paul Vasington, Director,
Telecommunications Division
Jaime D'Almeida, Telecommunications
Analyst

APPEARANCES:

Bruce P. Beausejour, Esq.
Barbara Anne Sousa, Esq.
New England Telephone & Telegraph Company
185 Franklin Street, Room 1403
Boston, Massachusetts 02110-1585
for New England Telephone & Telegraph Company
d/b/a NYNEX

Daniel Mitchell, Esq.
Assistant Attorney General
Regulated Industries Division
200 Portland Street, Fourth Floor
Boston, Massachusetts 02114
for the Office of the Attorney General
Cathy Thurston, Esq.
Sprint Communications Company
850 M Street, N.W., 11th Floor
Washington, D.C. 20036
FRITZ & SHEEHAN ASSOCIATES, INC.
295 Devonshire Street, Boston, MA 02110
(617)423-0500

Page 2

Robert Glass, Esq.
Glass, Segie & Liston
75 Federal Street
Boston, Massachusetts 02110
for MCI Telecommunications Corporation
Hope Baruleescu, Esq.
MCI Telecommunications Corporation
One International Drive
Rye Brook, New York 10573
Carl Giesy, Esq.
MCI Telecommunications Corporation
1133 19th Street, N.W.
Washington, D.C. 20036
Jodie Donovan-May, Esq.
Teleport Communications Group
Two Lafayette Centre, Suite 400
1133 21st Street, N.W.
Washington, D.C. 20036
for Teleport Communications - Boston
Jeffrey F. Jones, Esq.
Jay E. Gruber, Esq.
Palmer & Dodge
One Beacon Street
Boston, Massachusetts 02108
for AT&T Communications of New England
Robert L. Dewese, Jr., Esq.
Peabody & Brown
101 Federal Street
Boston, Massachusetts 02110-1832
for Cellular One
Mark R. Perikell, Esq.
Frontier Communications of New England, Inc.
29 Church Street
P.O. Box 967
Burlington, Vermont 05402-0967

Page 3

Eric J. Branfman, Esq.
Russell M. Blau, Esq.
Mary C. Albert, Esq.
Swidler & Berlin
3000 K Street, N.W., Suite 300
Washington, D.C. 20007-5116
for MFS Communications Company, Inc. and
Cablevision Lightpath, Inc.
Linda L. Oliver, Esq.
Kyle D. Dixon, Esq.
Hogan & Hartson, L.L.P.
555 Thirtieth Street, N.W.
Washington, D.C. 20004
for LDDS WorldCom
Alan D. Mandl, Esq.
Rubin and Rudman
50 Rowes Wharf

Boston, Massachusetts 02110
for New England Cable Television Association
Sheryl A. Butler, Esq.
Department of the Army
Office of the Judge Advocate General
901 N. Stuart Street, Suite 713
Arlington, Virginia 22203
for the Department of Defense and All Other
Federal Executive Agencies

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[1] October 10, 1995 9:08 a.m.

[2] **PROCEEDINGS**

[3] **MR. BESSETTE:** Let's go on the [4]
record, please. This is DPU 94-185, the
continuing [5] hearing in intralata and
local-exchange [6] competition. My name
is Thomas Besette, [7] co-hearing officer
in this case. With me on the [8] bench
today is Michael Isenberg, also co-hear-
ing [9] officer. We're expecting Mr. Vas-
ington shortly.

[10] Could I have counsel please identify
[11] themselves for the record, starting
with Mr. [12] Beausejour.

[13] **MR. BEAUSEJOUR:** Good morning,
Mr. [14] Besette. For NYNEX, Bruce
Beausejour and Barbara [15] Anne Sousa.

[16] **MR. BRANFMAN:** For Cablevision [17]
Lightpath and MFS, Eric Branfman.

[18] **MR. MITCHELL:** For the Attorney [19]
General of Massachusetts, Daniel Mit-
chell.

[20] **MR. GLASS:** For MCI, Robert Glass.

[21] **MS. DONOVAN:** For Teleport Boston,
[22] Jody Donovan.

[23] **MR. MANDL:** For the New England

Cable [24] Television Association, Alan
Mandl.

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[1] **MR. JONES:** For AT&T, Jeffrey Jones
[2] and Jay Gruber.

[3] **MR. BESSETTE:** Thank you very
much. [4] Today is the continuation of
NYNEX's rebuttal case, [5] and their
witness today is Ms. Paula Brown. Before
[6] Ms. Brown takes the stand, are there
any procedural [7] matters that anyone
would like to bring up? Mr. [8] Jones?

[9] **MR. JONES:** I just was curious what
[10] the intention of the Bench was as to
admitting [11] exhibits into evidence. I
assume we're having one [12] grand and
glorious moment in time when we will
make [13] our proffers, and I'm just
wondering when you plan [14] to do that.

[15] **MR. BESSETTE:** We plan to do that at
[16] the end of the hearings. We will be
notifying all [17] parties as to when that
will occur, hopefully in [18] the very near
future.

[19] **MR. JONES:** Thanks you very much.

[20] **MR. BESSETTE:** Any other pro-
cedural [21] matters? Ms. Brown, would
you take the stand, [22] please.

[23] **PAULA L. BROWN,** Sworn.

[24] **MR. BESSETTE:** Mr. Beausejour, you

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[1] may proceed.

[2] **DIRECT EXAMINATION**

[3] **BY MR. BEAUSEJOUR:**

[4] **Q:** Would you state your full name for
the [5] record, please.

[6] **A:** Paula L. Brown.

[7] **Q:** By whom are you employed, Ms.
Brown?

[8] **A:** NYNEX.

[9] **Q:** And did you file direct testimony in
this [10] matter?

[11] **A:** Yes, I did.

[12] **MR. BEAUSEJOUR:** Mr. Besette, I'd
[13] like to have two documents marked
for [14] identification. The first is the
rebuttal [15] testimony of Paula L. Brown.
I'd like that marked [16] for identification
and it's NYNEX Exhibit No. 97. [17] And a
NYNEX Exhibit No. 98 I'd like to have
marked [18] for identification the sup-
plemental rebuttal [19] testimony of Paul
L. Brown.

[20] **MR. BESSETTE:** Thank you, Mr. [2]
Beausejour. Those are so marked.

[22] (Exhibits NYNEX 97 and NYNEX 9
[23] marked for identification.)

[24] **Q:** Ms. Brown, I'm handing you wh-
I've

Page

[1] marked as NYNEX Exhibit No. 97 for
identification [2] and ask if you c-

artment went on and considered what would be (11) charged for local calls. The local calling we're (12) referring to is the local calling as described on (13) these pages and as described in our tariffs, and (14) not referring to toll calling. This isn't a tricky (15) kind of a thing; it simply is what it is. It's (16) where we're charging local-usage charges.

(17) **MR. MANDL:** I guess if it hasn't been (18) done already, out of an abundance of caution, I (19) just ask that the Department take administrative (20) notice of the company's intrastate tariff.

(21) **MR. BESSETTE:** Anything further, Mr. (22) Mandl?

(23) **MR. MANDL:** No.

(24) **MR. BESSETTE:** Any other follow-up

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(1) questioning?

(2) Mr. Beausejour, do you have any (3) redirect?

(4) **MR. BEAUSEJOUR:** Mr. Bessette, I do (5) not. I would, however, like to mark a number of (6) exhibits. They are NYNEX Exhibits 99 through 137. (7) They are all responses of Ms. Brown to information (8) requests. The particular items are listed on an (9) attachment that I'm providing to the reporter and (10) ask that it be made a part of the transcript in (11) today's proceeding. And I'm passing out copies to (12) the parties.

(13) **MR. BESSETTE:** Thank you.

(14) (Exhibits NYNEX 99 through NYNEX 137 (15) marked for identification.)

(16) **MR. BEAUSEJOUR:** I have one more (17) matter I'd like to cover before we leave for a (18) break. MFS marked as Exhibits 38 and 39 portions (19) of the company's September 15th filing in 95-83. (20) I'd like to reserve as NYNEX Exhibit 138 for (21) identification, to provide a copy of the complete (22) filing that was made by the company in that (23) docket. I'll provide copies to the Bench tomorrow (24) and provide copies to the other parties.

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(1) **MR. BESSETTE:** Very good. Anything (2) further? Off the record.
(3) (Recess taken.)

(4) **MR. BESSETTE:** Let's go back on the (5) record. We're moving now to the rebuttal case of (6) the New England Cable Television Association, (7) represented by Alan Mandl. Dr. Selwyn is his (8) witness.

(9) **LEE L. SELWYN, Sworn** (10) **MR. BESSETTE:** Mr. Mandl, you may (11) proceed.

(12) **MR. MANDL:** Thank you, Mr. Bessette.

(13) **DIRECT EXAMINATION**

(14) **BY MR. MANDL:**

(15) **Q:** Dr. Selwyn, would you state your name for (16) the record.

(17) **A:** My name is Lee L. Selwyn. My business (18) address is One Washington Mall, Boston, (19) Massachusetts 02108.

(20) **Q:** And what is your position with Economics (21) & Technology, Inc.?

(22) **A:** I'm president of the firm.

(23) **Q:** I'd like to show you a document entitled (24) Rebuttal Testimony and Exhibit of Lee L. Selwyn in

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(1) Docket 94-185. Can you identify that document?

(2) **A:** Yes. That contains my rebuttal testimony (3) and accompanying exhibit.

(4) **Q:** And was that testimony and exhibit (5) prepared by you or under your direction and (6) supervision?

(7) **A:** It was.

(8) **Q:** Do you have any changes or revisions in (9) that testimony or exhibit at this time?

(10) **A:** Yes, I do. I have a few small (11) corrections. The first one is at Page 17, Line (12) 22. At the very beginning of that line, before the (13) word "revenue," insert the word "intrastate." Then (14) further down on the same line, before the word (15) "contribution," insert the word "intrastate."

(16) The next correction I have is at Page (17) 37, Line 24. The figure \$20 on that line should be (18) changed to \$5.

(19) The next correction I have is at Page (20) 56, Line 28. And the word "LECs" following (21) "NYNEX's" should be deleted. So the sentence (22) should just read, "NYNEX's protectionist," et (23) cetera.

(24) I have one additional clarification

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(1) which I would offer without identifying (2) specifically any spot in the testimony: that when (3) I wrote this testimony there was some confusion, (4) apparently, about the application and calculations (5) of the retail and wholesale usage rates and the (6) application of the local switched-access rate, (7) which have now been apparently clarified by Ms. (8) Brown's testimony. So, to the extent that my (9) testimony is inconsistent with my current (10) understanding, that inconsistency should be (11) resolved in favor of my current understanding, (12) which is that the local switched-access charge was (13) computed on usage within the primary calling area, (14) within the Zone 1 calling area and within the Zone (15) 2 calling area, and that the local switched-access (16) charge as proposed by NYNEX would apply to calls (17) terminating within all of those areas.

(18) That completes my corrections and

(19) clarifications.

(20) **Q:** With those corrections and (21) clarifications, if you were asked the questions (22) contained in your rebuttal testimony today, would (23) your answers be the same?

(24) **A:** They would.

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(1) **Q:** And do you adopt that testimony as your (2) rebuttal testimony?

(3) **A:** Yes, I do.

(4) **MR. MANDL:** At this time NECTA would (5) request that Dr. Selwyn's rebuttal testimony be (6) marked as NECTA Exhibit 79.

(7) **MR. BESSETTE:** So marked.

(8) (Exhibit NECTA 79 marked for (9) identification.)

(10) **MR. MANDL:** Dr. Selwyn is available (11) for examination.

(12) **MR. BESSETTE:** Thank you. We'll (13) begin the cross-examination with the Attorney (14) General's office. Mr. Mitchell.

(15) **MR. MITCHELL:** Thank you, Mr. Hearing (16) Officer.

(17) **CROSS-EXAMINATION**

(18) **BY MR. MITCHELL:**

(19) **Q:** Good afternoon, Dr. Selwyn.

(20) **A:** Good afternoon.

(21) **Q:** First I'd like to get a couple of (22) definitions on the record. Your definition of (23) "marginal cost"?

(24) **A:** That's a tough one. "Marginal cost" is

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(1) defined in several different ways, but as a general (2) matter it means the costs that are incurred in (3) order to produce an additional unit of output. (4) Normally we think of marginal cost as being (5) associated with terms like "short-run" or "long- (6) run" marginal cost, and in some cases we use a (7) variation of "marginal cost" known as "incremental (8) cost," to recognize the fact that costs may not (9) vary in continuous fashion but rather vary in (10) discrete chunks or blocks and need to be examined (11) over larger increments of output change rather than (12) over infinitesimal changes in output, which is what (13) one normally associates with the term "marginal (14) cost" as used in economic theory.

(15) **Q:** Your definition of "LRIC," long-run (16) incremental cost?

(17) **A:** Long-run incremental cost would be the (18) change in cost over some specified increment of (19) output that is based upon the differential between (20) producing or not producing that particular (21) increment of output, reckoned over a sufficiently (22) long

period of time that capacity costs as a [23] general matter are considered to be variable. In [24] theory, long-run incremental costs are based upon

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[1] the assumption that all costs are variable, [2] although a practical implementation of that [3] frequently holds some costs as fixed.

[4] Q: Your definition of "TSLRIC," total-[5] service long-run incremental cost?

[6] A: Total-service long-run incremental cost [7] is a variation of long-run incremental costs, but [8] instead of looking at an increment of capacity, [9] like a change in output of 10 percent, for example, [10] it addresses the question what is the effect on [11] total cost if I either offer a particular service [12] or cease offering or, alternatively, do not offer a [13] particular service in its entirety. So if I were [14] to compute the total-service long-run incremental [15] cost, for example, of call-waiting service, I would [16] not be looking at changes in the output of [17] call-waiting service but in the question of simply [18] whether or not I offer that service or I choose not [19] to offer that service.

[20] Q: Your definition of "contribution"?

[21] A: Contribution is typically a differential [22] between the revenues generated by a particular [23] product or service or mix of products or services [24] and the incremental costs associated with producing

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[1] those services. But that is probably an overly [2] simplistic definition, because there are various [3] levels at which contribution can be measured, and [4] one would need in effect to have a more specific [5] example in order to provide a more precise [6] definition of the term.

[7] Q: I assume your definition of [8] "contribution" includes common costs and joint [9] costs; is that correct?

[10] A: Well, yes and no. Let me break that [11] question up into two components.

[12] Q: Sure.

[13] A: We normally think of contribution as [14] applying with respect to costs that do not vary [15] with the fact of providing a particular quantity or [16] category of service. Common costs are frequently [17] thought of as being fixed because they are [18] typically not directly attributable to any one [19] service; but in reality, common costs can be shown [20] to be highly variable with the aggregate output of [21] the firm.

[22] And what I've included in my exhibit [23] in Figure 1 is the results of an analysis that I [24] undertook in which I looked at the reported common

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[1] costs and total direct costs for approximately 30 [2] local-exchange carriers of varying sizes, from [3] small companies, like Southern New England [4] Telephone and Cincinnati Bell, to giants like [5] BellSouth and Southwestern Bell. And I undertook [6] to perform an ordinary least-squares regression [7] analysis on that relationship to determine whether [8] or not there was reason to believe that the common [9] costs did in fact vary with output and therefore [10] were not fixed. And when I did that, I obtained [11] results of the statistical analysis that confirmed [12] unambiguously that common costs are variable.

[13] Consequently, I would treat common [14] costs as part of the incremental cost or the [15] total-service long-run incremental cost of [16] individual services, and therefore I would not view [17] that as being recovered through contribution but [18] actually as being part of the buildup of the LRIC [19] or TSLRIC, as the case may be, for a particular [20] service.

[21] Q: Would those common costs include labor [22] and capital?

[23] A: Yes, they would include whatever costs [24] are associated with functions that are not

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[1] service-specific. You also asked me about joint [2] costs.

[3] Q: Yes.

[4] A: Let me make the distinction between [5] common and joint costs. Joint costs are typically [6] associated with resources that can be utilized to [7] provide multiple services. Let me give you an [8] example. Services like caller ID and call return [9] both utilize common-channel Signaling System 7 [10] equipment and facilities in the switching [11] architecture. Those facilities also are used to [12] furnish other services such as 800 database and [13] will potentially be used in the provision of local [14] number portability.

[15] If any one of those services [16] individually were not offered, for the most part [17] the same set of Signaling System 7 resources would [18] still be required. Therefore, those costs will not [19] vary with the presence or absence of an individual [20] service but rather with a group of services that [21] commonly share this particular resource.

[22] Now, the problem here becomes more [23] complex, in trying to identify how to assign or [24] attribute the cost of this resource to individual

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[1] services. The source of the complexity is that in [2] some cases a service simply couldn't be provided at [3] all

without the resource. Caller ID is a good [4] example; it could not be provided without Signaling [5] System 7. But there are other services that may [6] utilize that resource once it is put in place but [7] which in fact could be provided without Signaling [8] System 7 and have for many years been provided [9] without Signaling System 7. An example of that are [10] ordinary local and toll messages.

[11] So when one is confronted with the [12] problem of having to associate costs of a joint [13] resource or a joint element of plant with [14] individual services, one has to now focus not on so [15] much the current use or the after-the-fact use - [16] that is, use that is made once the resource is in [17] place - but rather on the purposes for which the [18] resource was acquired and which services it was [19] anticipated that the resource would make possible [20] that would otherwise not have been possible. So, [21] in that respect, what one needs to do in developing [22] a means of dealing with those joint costs is to [23] associate the acquisition of the resource with the [24] purpose for which the resource was acquired, and

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[1] that is a somewhat more complex process.

[2] Q: In Figure 1, which we just referred to [3] earlier, this particular diagram does not include [4] joint costs; is that correct?

[5] A: That's correct. This would include - [6] joint costs are directly assigned, but they're [7] assigned to a group of services rather than to [8] individual services. These are common costs that [9] are not assigned specifically to any service.

[10] Q: And just to distinguish, I gave as an [11] example of common costs labor and capital. Would [12] an example of joint costs be materials and [13] facilities?

[14] A: Well, I may have been too quick to agree [15] with you that labor and capital were common costs. [16] There are labor costs that are common, there are [17] labor costs that are joint, there are labor costs [18] that are direct, and the same is true for capital [19] and the same is true for materials. So I guess I [20] was interpreting your question as do common costs [21] include, among other things, labor and capital? [22] The answer to that is yes. Are all labor and [23] capital costs common? The answer to that is [24] definitely no.

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[1] An example of common costs might [2] be - the traditional example is the president's [3] salary or the president's desk, the salary being [4] labor and the desk being capital.

[5] Q: That's consistent with other witnesses [6] who have testified in this case

as well.

(7) In your definition of "contribution" (8) does it include a return to shareholders of the (9) assets that are necessary to be put in place as a (10) result of the provision incrementally of the good (11) or service being provided?

(12) A: No, I would include the target return as (13) a cost, as part of the incremental cost; in other (14) words, the return that is expected from the (15) investment in the asset, including both the return (16) and any associated depreciation of that asset (17) investment as part of the incremental cost, part of (18) the directly assigned cost.

(19) Q: Can you distinguish your definition of (20) "contribution" from the definition of (21) "contribution" being proposed by NYNEX in this (22) case?

(23) A: Well, let me say at the outset: It isn't (24) clear to me precisely how NYNEX developed what it

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(1) characterizes as its incremental costs. Therefore, (2) I do not know whether or not those incremental (3) costs include, for example, the attribution of (4) variable common costs. To the extent that those (5) costs do not include variable common costs, those (6) costs understate incremental cost, and that should (7) be corrected. So in that respect the so-called (8) "contribution" that NYNEX associates with these (9) various individual services may be overstated if (10) the costs are understated by exclusion of variable (11) common costs.

(12) I do not interpret from the way that (13) the cost studies - the cost results have been (14) presented that the contribution associated or (15) attributed by NYNEX to services like basic (16) residential service, for example, or like the (17) average residential subscriber who is paying some (18) \$31 and where the company is spending something (19) like a little under \$20 to provide that service - (20) that contribution appears to not relate to joint (21) costs at all because they are including the \$31 (22) figure includes presumably all of the various (23) services that are associated with the residential (24) subscriber.

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(1) So on that basis one must assume that (2) the additional revenue is being used for (3) something. It is a contribution perhaps to (4) corporate overheads that aren't included in the (5) underlying costs. It may be a contribution toward (6) recovery of sunk costs, of embedded costs that are (7) no longer efficient or would be greater than (8) incremental costs because incremental costs (9) typically are lower than embedded costs. There may (10) be any of a number of

things that the company is (11) doing with respect to this contribution.

(12) As a general matter, as I understand (13) the rate-setting process that was adopted in Docket (14) 89-300 and that has been pursued to this day, the (15) company starts with an embedded-cost revenue (16) requirement, which is fundamentally a (17) noneconomically efficient price level, and then (18) subtracts from it certain rates that are explicitly (19) determined, such as local and toll usage charges, (20) where the prices have been moving toward long-run (21) incremental cost; and then whatever is left the (22) company associates with the dial-tone line and (23) apparently attempts to attribute that - or (24) characterize that, at least from Ms. Brown's

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(1) testimony this afternoon, as an economically (2) efficient price of the dial-tone line. I would (3) strongly disagree with that characterization. But (4) apparently, to the extent that the embedded-cost (5) revenue requirement exceeds the economically (6) efficient price level, then the differential is (7) recovered through this contribution.

(8) Q: In your definition of "contribution," you (9) had revenues of a service or mix of services less (10) the incremental cost associated with producing the (11) service or mix of services; correct?

(12) A: Correct.

(13) Q: Now, the incremental costs that you're (14) referring to here, are you referring to the LRIC (15) method of costing or the TSLRIC method of costing?

(16) A: Well, both are appropriate under certain (17) circumstances. As a general matter, when one looks (18) at a - in the context of a potentially competitive (19) marketplace, one normally is looking at TSLRIC, (20) because there is essentially - What TSLRIC is (21) trying to capture is all of the costs associated (22) with the decision to offer a particular service, (23) and that would include service-specific fixed (24) costs, which might not be included, for example, if

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(1) one were simply focusing on an increment of (2) capacity or an increment of output.

(3) Q: Now, there's been an issue with regard (4) to, when applying TSLRIC and the TSLRIC test, (5) whether or not the costs to be used in that test (6) would be strictly the forward-looking costs or (7) would it include some of the current costs of the (8) network providing the service, such as NYNEX's (9) network, of providing the services today and their (10) switches or the locations of their

switches. In (11) your application of TSLRIC there's been the (12) distinction between the scorched-earth version and (13) the scorched-node version. In the scorched-node (14) version you'd leave NYNEX's current switches in (15) place. Would you recommend one TSLRIC methodology (16) over the other?

(17) A: I tend to favor something that is (18) probably closer to what some have called (19) "scorched-node," only in the sense that assets (20) have finite lives, and even if we started with a (21) scorched earth, where we had a completely clean (22) slate and were building a network from scratch, we (23) would not construct it instantaneously. There (24) would be a lengthy process to build up from Ground

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(1) Zero. And as soon as the first shovel of earth, so (2) to speak, were taken, we are no longer dealing with (3) a clean slate. In other words, as we build our (4) network from the ground up, we impose engineering (5) and architectural constraints that will continue to (6) exist.

(7) So even if one were to start today (8) looking at the architecture that exists today, in (9) three years that architecture, a scorched-earth (10) review might reveal a different architecture (11) entirely, if there's some fundamental technological (12) change, but commitments will have been made to (13) proceed in a particular direction. And so (14) consequently I would as a general matter feel that (15) one needs to look at the assets as they presently (16) exist and develop a cost structure that (17) contemplates utilizing - or how one would design (18) future construction of the network given the design (19) constraints that are imposed by the existing (20) architecture.

(21) So it's not so much a matter of (22) treating - I think there's some confusion on this (23) point. I'm not suggesting that sunk costs be (24) treated as zero - I don't agree with that - but

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(1) that the design constraints that are imposed by the (2) existing architecture be recognized and that they (3) be used to constrain the development of a (4) forward-looking cost model.

(5) Q: On Page 57 of your rebuttal testimony (6) you're addressing stranded investment. And on Line (7) 15 you're asked the question, "How should recovery (8) of stranded investment be dealt with under the type (9) of price-cap incentive regulation plan adopted by (10) the Department in DPU 94-50?" And on Line 18 you (11) respond, "Adoption of a price-cap plan or other (12) alternative form of regulation eliminates any (13) possible claim of recovery of stranded (14) investment."

[15] First, what is included in your [16] definition of "stranded investment" here?

[17] A: Well, that in itself is an interesting [18] question, and I'm not sure there's a clear answer. [19] The telephone company would typically argue that [20] stranded investment exists when as the result of [21] the entry of competition, for example, it is not [22] able to generate, continue to generate, a given [23] level of revenue from a particular asset and [24] consequently its ability to recover the investment

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[1] in that asset is compromised. So the amount that [2] would be stranded would presumably be that portion [3] of the embedded cost of the asset - that is, the [4] remaining book value of the asset - that is [5] incapable of generating revenues for the recovery [6] of that remaining investment.

[7] Q: Does this definition also include current [8] overvalued plant?

[9] A: That's why I said, it's sort of often [10] difficult to really identify this with [11] specificity. Plant may be overvalued for a number [12] of reasons, including the fact that there are now [13] technological alternatives that can be used and [14] acquired at lower cost. So if I bought something [15] last year for a million dollars that I intended to [16] last ten years and now, this year, the price has [17] dropped to a half a million, then clearly I made a [18] business decision that perhaps involved the [19] premature acquisition of an asset and as a [20] consequence I now have to in effect write down the [21] value of that asset as an economic matter. And [22] that is typically somehow included in the overall [23] discussion, in part because competition may well be [24] blamed for this condition.

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[1] Q: Would it include differences in the rate [2] of depreciation? In other words, the company may [3] have come in during previous proceedings, [4] recommended a shorter depreciation period, was [5] granted a longer depreciation period. Now it has, [6] so to speak, plant still outstanding on the books [7] that if the faster-recovering depreciation rates [8] were adopted would no longer be on the books [9] today.

[10] A: Well, the relevant question that one [11] would have to ask is, was the investment prudently [12] made given the rate of depreciation that was to be [13] authorized? In other words, did the investment [14] have a positive net present value given the [15] amortization schedule that the company would have [16] been required to use?

[17] If the answer to that is yes and the [18]

company proceeded with the investment, with [19] knowledge of the depreciation condition that it [20] confronted, then the acquisition is at its risk and [21] it is and should be held responsible for it. Now, [22] if the acquisition would have been prudent let's [23] say based on a shorter economic life but because [24] the Department, because the regulator, decided that

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[1] the economic life needed to be artificially [2] extended, or at least arguably artificially [3] extended, and consequently at the longer life [4] perhaps the investment would not have proved out [5] based on a slower rate of recovery, and the company [6] proceeded to make the investment anyway, well, once [7] again, that's its responsibility; it's not the [8] responsibility of other ratepayers.

[9] So in the context of the current [10] regulatory paradigm and the manner in which [11] capital-investment decisions are made by telephone [12] utilities, I don't believe that there is any [13] inherent entitlement to capital recovery provided [14] there was adequate knowledge of the condition of [15] the depreciation practices of the regulator at the [16] time that the investment was incurred.

[17] Q: When Dr. Kahn was here the other day, I [18] asked him what would it take for him to eliminate [19] the contribution that was proposed in NYNEX's [20] proposal in this case. He narrowed it down to at [21] least two things. Dr. Taylor added a third point. [22] But the two things that Dr. Kahn narrowed it down [23] to were, first, it would require the Department to [24] rebalance its rates, meaning move all of its rates

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[1] to target, upwards or downwards; and second, it [2] would be to allow the company to recover, say, over [3] an amortization period of five to seven years for [4] any prudently incurred overvalued plant. I'm [5] wondering if you agree with that recommendation. [6] If so, please explain why. If not, please explain [7] why not.

[8] A: I don't agree with it, and I think, with [9] all due respect to Professor Kahn, I think that it [10] is a gross oversimplification of the situation that [11] we're now confronting.

[12] Q: In his defense, I hope I haven't [13] oversimplified it on his behalf. But I think [14] that's what he meant.

[15] A: Nevertheless, I'll try to answer your [16] question and your characterization of his [17] testimony.

[18] Q: Thank you.

[19] A: If, as I believe is the case, the [20]

contribution that is inherent in the price levels [21] that NYNEX currently charges and proposes to [22] continue to charge, if that is predicated upon the [23] existence of overvalued plant on its books - in [24] other words, recovery of an embedded revenue

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[1] requirement that exceeds the replacement cost of [2] that plant - then all the rate rebalancing in the [3] world won't correct this problem, because all that [4] rate rebalancing will do is to shift the excess [5] burden around from one service to the other.

[6] Now, when we were looking at rate [7] rebalancing in Docket 89-300 - and it is, I might [8] add, rather ironic that Dr. Kahn admonished this [9] Department to pursue rate rebalancing since this [10] Department was probably one of the first regulatory [11] agencies in the United States to pursue and to [12] implement a rate-rebalancing plan and is ahead of [13] most other states in that department.

[14] Q: I think he agreed with what you're [15] saying, that he thought the Department did the [16] right thing by pursuing rate rebalancing. I don't [17] think he admonished the Department for that.

[18] A: But at the time that the Department was [19] looking at rate rebalancing in Docket 89-300 - and [20] I served as a consultant to the Department during [21] the course of Docket 89-300 - the issue there was [22] that local-exchange service was considered to be a [23] fairly inelastic service element, whereas local and [24] toll usage was considered to be fairly price-

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[1] elastic, and the efficient solution in the context [2] of rate-of-return regulation was to lower the rate, [3] to reduce the rate, for local and toll usage, to [4] bring those rates closer to cost, so as to [5] encourage consumption, and efficient consumption, [6] based upon the relatively low incremental cost [7] associated with that service, and to recover the [8] embedded revenue requirement from the price- [9] inelastic service, which at the time was basic- [10] exchange service.

[11] And the entitlement to do that, as a [12] policy matter, was the result of the Department's [13] maintenance at that point in time of rate-of-return [14] regulation. At that point in time New England [15] Telephone was entitled to recover its embedded-cost [16] revenue requirement. So if local and toll usage [17] charges were to be reduced, necessarily something [18] else had to go up in order for the revenue [19] requirement to be fulfilled.

[20] Now, that condition has changed in

[21] several fundamental ways between 1989 or 1990 and [22] today. First, we are on the cusp of an era in [23] which we will have competition, perhaps, in the [24] provision of local-exchange service, in addition to

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[1] competition in the provision of local and toll [2] usage. Now, in that context the price elasticity [3] of demand confronting New England Telephone for [4] local-exchange service, the firm price elasticity [5] as opposed to the market price elasticity, is no [6] longer at or near zero. If there is competition in [7] that market, then presumably, if New England [8] Telephone's prices are too high, then competitors [9] will come along and pick up some of the market [10] demand.

[11] As a consequence, it will not be [12] possible as an economic matter in the context of a [13] competitive market for the telephone company to [14] continue to maintain prices that are based upon [15] recovering embedded costs that exceed incremental [16] costs. So whether the company and Professor Kahn [17] like it or not, if competition develops, this [18] contribution will necessarily evaporate. Its only [19] basis for existence is the inefficient decision to [20] in effect exploit the current semicompetitive, [21] semimonopolistic condition by imposing inefficient [22] above-cost prices on the monopoly elements, only to [23] reduce them in response to the development of [24] competition in each place it shows up. That has a

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[1] number of very serious consequences, not the least [2] of which is potentially stimulating inefficient [3] competition, because it sends false pricing signals [4] to would-be competitors and then attempts to [5] surgically eradicate them as soon as they bubble up [6] out of the surface and begin to offer service.

[7] I don't agree with the notion that [8] you can solve this problem simply by changing the [9] amortization schedules, either. The real source of [10] the problem is the fact that the telephone company [11] has failed to accommodate the development of [12] competition, the potential development of [13] competition, in its investment programs. It has [14] continued to acquire plant at essentially the same [15] rate it did in the past, without concern for the [16] fact that some—that it may be losing market [17] share. And as a result, it has built up an [18] embedded base of plant that in the context of a [19] competitive market may be excessive. If by virtue [20] of the so-called efficient-component pricing rule [21] or some other scheme to preserve this historic [22] contribution the company is simply

made whole with [23] respect to these investment decisions and is [24] protected from the loss of market share, then

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[1] competition is seriously disserved, because the [2] company at that point has no incentive to compete.

[3] Q: The term "regulatory bargain" has come up [4] a number of times in these hearings. I'd like to [5] hear your definition of "regulatory bargain," if [6] you have a definition for it.

[7] A: Well, let me start by my understanding of [8] the traditional use of that term as, for example, [9] Professor Kahn would use it, and then I'll describe [10] my variation on it.

[11] Q: Sure.

[12] A: Professor Kahn speaks of a regulatory [13] bargain in the context of the quid pro quo that is [14] offered to the public utility. We the public [15] through the regulatory process will protect your [16] monopoly and assure you the ability to recover your [17] investment, in return for which you the utility [18] will agree to set prices so as to earn only a fair [19] return on your investment and not exploit that [20] monopoly.

[21] Under the regulatory bargain as [22] Professor Kahn would characterize it, the utility [23] has an entitlement to be made whole for its [24] investments; that the investments were arguably

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[1] made in contemplation of the expectation of [2] recovery; and that, notwithstanding other changes [3] in the world at large, the utility is entitled to [4] that recovery.

[5] I view the regulatory bargain as [6] having been significantly modified by both the [7] Department and NYNEX in the context of the [8] alternative-regulation plan that the Department [9] adopted earlier this year, because now, instead of [10] this assurance of capital recovery in exchange for [11] certain commitments with respect to pricing, NYNEX [12] is given the opportunity to earn potentially [13] higher-than-previous rates of return. It's given [14] the opportunity to set rates at levels that may in [15] some cases be monopolistic or may reflect the [16] absence of competition in particular segments of [17] the market. It's also give the opportunity to [18] respond to competition by reducing prices and [19] taking other measures that will give it the ability [20] to compete. And it is no longer to be regulated on [21] the basis of traditional things like rate base and [22] earnings levels and depreciation rates and the [23] like. Rather, it's simply going to be allowed to [24] retain whatever earnings are to be generated

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[1] provided it adheres to the Department's price-cap [2] rules.

[3] Under the new regulatory bargain the [4] company accepts a great deal of risk that in the [5] past was borne by ratepayers. Among those risks [6] are the risks of competitive losses. More [7] importantly, the price-cap form of regulation that [8] the company now operates under was not something [9] that was imposed upon it externally; it's something [10] that the company aggressively and affirmatively [11] sought and won.

[12] So it seems to me that one now has to [13] think of the regulatory bargain as the condition [14] that exists where the company assumes risks but is [15] given the opportunity to exploit assets. If NYNEX [16] is able to increase the value of assets above those [17] assets' original cost by diligently utilizing them [18] and exploiting them in creative ways, there is no [19] obligation under the price-cap plan for NYNEX to [20] share the gain in asset value with ratepayers or to [21] otherwise make any other accommodation in the price [22] levels that it charges for the services that it [23] continues to hold market power over. And [24] consequently, it is completely inappropriate under

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[1] any sense of a regulatory bargain for the company [2] to have the right to retain all of the gains which [3] its market value, the market value of assets exceed [4] original cost and exceed book values, while [5] claiming some entitlement to be made whole where [6] the opposite is true.

[7] The real question to be asked is [8] whether or not in the aggregate the valuation of [9] NYNEX Massachusetts is above the book value — the [10] market valuation of NYNEX Massachusetts exceeds the [11] book value of NYNEX Massachusetts. And if it does, [12] then all of the conditions of the regulatory [13] bargain that Dr. Kahn talks about are fully [14] satisfied and there is no basis for or [15] justification for any specific stranded-investment [16] recovery.

[17] Q: Dr. Selwyn, I'd like to talk to you about [18] universal service. I realize in your testimony [19] you're recommending that if universal-service [20] funding is necessary, that it be done in a [21] competitively neutral manner and administered by a [22] neutral third party. Is that correct?

[23] A: Yes.

[24] Q: Is there any way that we can determine in

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[1] this proceeding whether or not the fund is actually [2] necessary?

[3] A: That's a very interesting question, [4] because Massachusetts presents a very unique fact [5] set relative to most other states that the [6] Department I think needs to be aware of. I've [7] testified in a number of cases, and the typical [8] scenario involving the issues of competition and [9] universal service and universal-service funding is [10] the claim by the incumbent local telephone company [11] that its price for residence service is below cost, [12] that it needs to be able to retain other sources of [13] subsidization in order to continue to price its [14] residential service below cost and therefore it [15] needs some funding mechanism to assure itself, to [16] be assured that it will have the wherewithal and to [17] continue to have the resources so as to maintain [18] below-cost pricing of residential services.

[19] Here we have a very different [20] situation. We have above-cost pricing - admitted, [21] conceded by NYNEX, that its prices for basic [22] residential service, both for the dial-tone line [23] standing alone and for the totality of services [24] that residential customers purchase exceeds cost.

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[1] Q: On an average.

[2] A: On an average basis. Now, where would [3] that cost deviate from average? Well, it will tend [4] to deviate from average perhaps in exchanges of [5] different sizes. But that deviation will be [6] relatively small. Certainly there is enough [7] margin - we're looking at a margin by NYNEX's own [8] reckoning and by my calculations of something like [9] \$14 1/2. You have a \$31-and-some-change intrastate [10] revenue plus a \$3.50 subscriber line charge against [11] total costs, which brings us to about \$34 and [12] change - against total incremental costs, by [13] NYNEX's own reckoning, of something in the range of [14] \$20. We'd have to get really far, really far, from [15] the average before we cross that threshold.

[16] And the factual conditions that [17] prevail in this state suggest that if there ever [18] were a place where there should be little, if any, [19] concern about cream-skimming, about any [20] deterioration of universal service, and so on, this [21] is the place. The rates that apply in [22] Massachusetts for basic residential service are [23] higher than in many other places. The local [24] calling areas tend to be frequently smaller than in

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[1] many other places. Historically the local and toll [2] rates have been higher than in many other places. [3] And you see that when you see an average revenue [4] per residential access line in the range of [5] \$34-and-some-odd dollars.

[6] So I just do not think that the kind [7] of canned testimony that you got from Professor [8] Kahn on this subject, for example, which is the [9] same testimony he gives in other places where these [10] facts do not apply, is applicable here.

[11] Q: I take it, then, in your opinion it would [12] be more likely than less likely that universal [13] funding would not be necessary, or a separate [14] universal-service fund would not be necessary in [15] Massachusetts?

[16] A: Well, there are reasons why certain kinds [17] of funding may be appropriate. Now, there are a [18] couple of ways, for example, you could do this. [19] You could impose a requirement on all competing - [20] on all local-exchange carriers, both NYNEX and new [21] entrants, that any qualifying customer, a customer [22] who qualifies, for example, for lifeline support, [23] for the elimination of the interstate subscriber [24] line charge and for the lifeline discount for

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[1] intrastate, against the intrastate rates, must be [2] given that and must be given it through a mechanism [3] that is internally funded; in other words, if MFS [4] or Cablevision or, you know, whomever offers [5] residential service, that that company, each of [6] those companies, will provide the lifeline subsidy [7] to any qualifying customer who requests it.

[8] Now, if it turned out that there was [9] some disproportionate demand for this, that NYNEX [10] was providing a greater share, a greater proportion [11] of lifeline discounts, for example, than others, [12] then some sort of pooling of this - pooling [13] mechanism might be appropriate. But certainly as [14] an interim measure it's perfectly reasonable to [15] simply say, "This is a requirement." You don't [16] have to impose some sort of a bean count such as [17] the company has suggested, in terms of trying to [18] make sure proportions are the same. What you [19] simply do is say, "You can't refuse." And then [20] perhaps a year or two later you go and see how it's [21] working.

[22] And then the only issue there is, [23] again, not a matter of disqualification, but if [24] things are so far out of balance that it pays to

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[1] incur the administrative costs of the pooling [2] mechanism, then go ahead and do it. And if things [3] are pretty close to being in balance, why spend the [4] money for the pooling mechanism? Just simply from [5] an administrative-cost standpoint.

[6] Q: With regard to a qualifying lifeline [7] customer, how would you determine

a qualifying [8] lifeline customer?

[9] A: Whatever NYNEX presently uses - and I [10] confess that I don't remember precisely what the [11] details are for qualification in Massachusetts. [12] But whatever it is that would qualify for a [13] customer for a lifeline discount under NYNEX's [14] tariff would be applied uniformly to all local- [15] exchange carriers.

[16] Q: Thank you, Dr. Selwyn.

[17] MR. BESSETTE: Thank you, Mr. [18] Mitchell. We'll continue cross-examination with [19] Mr. Branfman.

[20] CROSS-EXAMINATION

[21] BY MR. BRANFMAN:

[22] Q: Good afternoon, Dr. Selwyn.

[23] A: Good afternoon.

[24] Q: Would you please turn to Page 47 of your

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[1] testimony. My question is with reference to Lines [2] 6 and 7, where you reference NYNEX's government- [3] granted franchise to provide local telephone [4] service on an exclusive monopolistic basis. Could [5] you please explain what you meant by that?

[6] A: Well, I was speaking there in terms of [7] the de facto condition. I'm not sure of the [8] precise legal status of NYNEX's franchise; but [9] certainly as a practical matter, since roughly the [10] turn of the century, NYNEX has had what amounts to [11] both an exclusive ability to provide service and [12] the assurance under the regulatory bargain that [13] exists in this state of the right to set prices [14] that permit it to recover its investment and earn a [15] fair return.

[16] MR. BRANFMAN: I have nothing [17] further. Thank you.

[18] MR. BESSETTE: Thank you. The [19] Department will question now, with Mr. Vasington.

[20] EXAMINATION

[21] BY MR. VASINGTON:

[22] Q: Good afternoon.

[23] A: Good afternoon.

[24] Q: Would you please turn to Page 37. At the

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[1] top of the page, on Lines 1 to 3, you state that [2] NYNEX proposes to furnish certain of its basic [3] services for resale and to withhold others from the [4] resale market but at wholesale prices that are set [5] equal to its retail prices. What specifically are [6] you referring to there?

[7] A: It's my understanding - what I'm [8] referring to there is bundled services. It's my [9] understanding that premium services, for example, [10] and flat-rate